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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,306	10/26/2001	Lawrence J. Karr	50037.55US01	6816
27488	7590	09/21/2005	EXAMINER	
MICROSOFT CORPORATION C/O MERCHANT & GOULD, L.L.C. P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			PHU, PHUONG M	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/044,306	<b>Applicant(s)</b> KARR, LAWRENCE J.	
	<b>Examiner</b> Phuong Phu	<b>Art Unit</b> 2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-30 and 32-35 is/are pending in the application.
- 4a) Of the above claim(s) 6-10, 16-18 and 24-30 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 33, 34 is/are allowed.
- 6) ☒ Claim(s) 1-5, 11-15, 20-23 and 35 is/are rejected.
- 7) ☒ Claim(s) 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This Office Action is responsive to the Amendment filed on 8/24/05.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 11-14, 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Takimoto (4,004,100), previously cited.

-Regarding to claim 1, see figures 1, 2, 3A, 3B and col. 3, line 7 to col. 4, line 18,

Takimoto discloses a method comprising:

step (24) (see figure 2) of generating a plurality of synchronization patterns (A, B, C) (see figures 3A, 3B), wherein each of the plurality of synchronization patterns differ from the other synchronization patterns by a time shift ;

step (21, 22, 23, 102) (see figures 1 and 2) of encoding each (1', 2' or 3') of a plurality of portions (1', 2', 3') of an information signal with a header (A, B or C), each header comprising one of the plurality of synchronization patterns; and

step (102) (see figure 1)) of transmitting the encoded information signal over a communications system.

-Regarding to claim 2, Takimoto disclose that each of the plurality of synchronization patterns differs from the other synchronization patterns by (2 or 3 symbols) as a multiple of

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1/m of a symbol-time shift ( $m=3$ ), and wherein there are  $m$  headers, and  $m$  is any positive, non-zero integer (see figures 3B).

-Regarding to claim 3, Takimoto discloses that each of the plurality of synchronization patterns differs by the other synchronization patterns by a multiple of 1/m of a symbol-time shift ( $m=2$ ), and wherein there are  $n$  headers ( $n=3$ ), and  $m$  and  $n$  are any positive, non-zero integers such that  $m$  is not equal to  $n$ .

-Regarding to claim 4, Takimoto disclose that the synchronization pattern is at least one of a random sequence, a pseudo-random sequence, and a periodic sequence (see figure 3A).

-Regarding to claims 11 and 20, see figures 1, 2, 3A, 3B and col. 3, line 7 to col. 4, line 18, as being explained in claims 1-4, Takimoto discloses a method and associated system wherein the method/system comprises:

step/means (24) (see figure 2) of generating a synchronization pattern;

step/means (21, 22, 23, 102) (see figures 1 and 2) of encoding  $m$  portions ( $1', 2', 3'$ ) of an information signal with  $m$  headers ( $m=3$ ) to provide an encoded information signal, wherein  $m$  is a positive integer and each header comprising the synchronization pattern, wherein after the first synchronization pattern, each synchronization pattern is shifted by a fraction of a symbol-time from the other preceding synchronization patterns; and

step/means (102) (see figure 1) of transmitting the encoded information signal over a communication medium (109).

-Claims 12, 21 are rejected with similar reasons set forth for claims 2 and 3.

-Claim 13, 22 are rejected with similar reasons set forth for claim 4.

-Regarding to claim 14, Takimoto discloses that the synchronization pattern is a periodic

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sequence that is uniquely identifiable from the information signal (see figures 3A and 3B).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 15, 23 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takimoto.

-Regarding to claims 5, 15, 23 and 35, Takimoto does not disclose that the synchronization pattern comprises a maximal-length sequence of length 15 generated by a 4-bit linear feedback shift register.

Takimoto disclose that the synchronization pattern comprises a maximal-length sequence of length 7 generated by a 3-bit linear feedback shift register.

However, using an m-bit linear feedback shift register to generates synchronization patterns which each comprises a maximal-length sequence of length  $(2^m-1)$  is well-known in the art, and the examiner takes Official Notice. (It's also recognized that Takimoto synchronization pattern is one example of them).

It would have been obvious for one skilled in the art, within his skilled and based upon his design preference, to implement Takimoto synchronization pattern as a maximal-length sequence of length 7 generated by a 3-bit linear feedback shift register so that Takimoto method/system would make unauthorized remote stations more difficult to detect the

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transmitted encoded information signal (because of the longer length of the synchronization pattern) in order to gain more security during the signal transmission.

***Allowable Subject Matter***

5. Claims 33 and 34 are allowed.
6. Claim 32 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

7. Applicant's arguments filed on 8/24/05 have been fully considered but they are not, in part, persuasive.

-The objection on the Oath/Declaration has been withdrawn since the Office has received a copy of the Oath/Declaration which overcomes the objection.

-Claims 32-34 are now indicated as set forth above.

-With respect to independent claims 1, 11, 20, Applicant's arguments have been considered. However, the claims, after being amended, are deemed not overcome the previously cited reference because of reasons in the corresponding rejections to the claims, as set forth above in this Office Action.

-Regarding to claims 5, 15, 23 and 35, the applicant mainly argues that using an m-bit linear feedback shift register to generate synchronization patterns which each comprises a maximal-length sequence of length  $(2^m - 1)$  is not well-known in the art.

The examiner respectfully disagrees. In order to clarify this well-known feature, the examiner now cites reference Sklar, "Digital Communications Fundamentals and Applications",

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published by Prentice Hall, in 2000, pages 729-730, which teaches it can be done by using an m-bit linear feedback shift register to generate synchronization patterns which each comprises a maximal-length sequence of length  $(2^m - 1)$  (see figure 12.7, and pages 729-730).

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (6:30-2:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Phuong Phu*

Phuong Phu  
09/01/05

**PHUONG PHU**  
**PRIMARY EXAMINER**

Phuong Phu  
Primary Examiner  
Art Unit 2631